CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
WALTER M. DICKIE, M.D., Director

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EDITOR

*Coccidioides Immitis in Lesions of Slaughtered Animals**

M. DORTHY BECK, Assistant Epidemiologist, California State Department of Public Health

During the course of an epidemiological investigation of *coccidioidal granuloma*, examinations were made of lesions from slaughtered animals. Specimens were obtained through the cooperation of the Bakersfield Packing Company, Kern County, California. A total of 38 such specimens were examined over a period of three months. The following table gives the details:

TABLE I

Showing Types of Lesions, Number Examined, with Number and Percentage Found Positive

Type of lesion in slaughtered animal	Number examined	Number positive	Per cent positive
Skin abscess	1	0	0
Sub-maxillary gland	5	0	0
Mediastinal lymph gland	7	5	71.4
Bronchial lymph gland	5	2	40.0
Retropharyngeal lymph gland	3	0	0
Lung	7	0	0
Liver	8	0	0
Mesenteric glands	1	0	0
Tongue abscess	1	0	0
Totals	38	7	18.4

Six of the positives were from cattle and one was from a sheep. The lesions seem to be localized in the upper respiratory tract and apparently no other lesions are to be found in the animals. Whether the disease would become generalized in time can not be stated as there is no evidence available at present. A study of the histories of the infected animals reveals no common factor. The geographical distribution of these animals is as wide as that of the human cases recorded.

The method of examination was as follows: Each specimen was given a serial number when brought to the laboratory. A direct smear of the pus was made using 10 per cent KOH to demonstrate the presence of double contoured capsules. Another smear was made and stained by the acid-fast method for the presence of tubercle bacilli. This was done to eliminate tuberculosis. Some of the pus was stained with 1 per cent hematoxylin. Cultures were made on Sabouraud's agar slants and in plain broth. These were incubated at 37.5 degrees C. for seven days. The average incubation for these strains was four days and the maximum was six days. The cultures were inoculated into guinea pigs as a final test in order to determine that the fungus growth was *Coccidioides immitis*. The autopsy specimens from these animals were examined by the same methods as above.

Through the help and cooperation of Doctor E. C. Dickson, Stanford Medical School, San Francisco, sections were made of the original animal lesions and also of the infected guinea pigs. The results confirmed the cultural findings. Table II is a summary of the laboratory examinations made, with the results.

TABLE II

Summary of Laboratory Examinations with Results

Laboratory number	Direct smear	Acid-fast stain	Hematoxylin stain
9	Negative	Negative	D. C. C. (1)
14	Negative	Negative	(2)
18	Negative	Negative	D. C. C. (1)
19	Negative	Negative	D. C. C. (1)
22	Negative	Negative	D. C. C. (1)
26	D. C. C. (1)	Negative	D. C. C. (1)
29	D. C. C.	Negative	D. C. C. (1)

(1) Double contoured capsules.

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Cultures	Sections of original lesions	Guinea pigs (3)
Fungus in 5 days	Positive	Positive
Fungus in 4 days	(2)	Positive
Fungus in 3 days	(2)	Positive
Fungus in 3 days	Positive	Positive
Fungus in 6 days	Positive	Positive
Fungus in 4 days	Positive	Positive
Fungus in 3 days	(2)	Positive

(2) Insufficient material, *i. e.*, pus on swab.
(3) Cultures and smears from lesions positive.

It may be concluded from the above table that the lesions from seven slaughtered animals, *i. e.*, six cattle and one sheep, were proven to contain *Coccidioides immitis.* Giltner encountered the infection in bovine bronchial and mediastinal lymph glands from an animal slaughtered in San Diego, California. Although very little is known of the mode of infection of *coccidioidal granuloma* it does not seem likely that humans are infected from animals, but rather that both man and animals are infected from the same source.

CALIFORNIA'S INFANT MORTALITY RATE IS STILL LOW

The infant mortality rate for 1928 is 62.4; in 1927 the same rate was 62.5. While the decrease is negligible it indicates that the many agencies within the state that are working for the betterment of child health are accomplishing most desirable results in safeguarding the lives of California children. The commissioner of public health for the state of New York has said that the infant mortality rate is the best index to general conditions of public health in any community. It is reasonable to assume that any community that cares for the health of its children properly will also take proper safeguards against encroachments of disease upon its general population. The reduction in the infant mortality rates for California and for the United States registration area during the past five years is indicated in the following table:

	United States	*California*
1924	71.9	67.3
1925	71.5	68.5
1926	73.3	62.9
1927	64.7	62.5
1928	---	62.4

While there are many factors that enter into the making of these low rates it is a conspicuous fact that those cities which support continuously well directed activities for the promotion and maintenance of infant welfare achieve the lowest records. It is in the rural districts, where such machinery is often totally lacking, that infants have the poorest chances of survival. There is adequate justification for the statement that babies fortunate enough to be born in Pacific Coast states are more likely to live through the precarious first year of their existence than if they were born in any other part of the country. There were 5220 infant deaths in 1928 and 5268 such deaths in 1927.

SICK SCHOOL CHILDREN CAUSE MONEY LOSS

California taxpayers spend large sums of money for the education of California children. More money, in fact, is spent upon educational projects than any other department of our government. Money spent in the education of the children who are not fit physically to receive the educational advantages, is wasted unnecessarily. As a matter of economy alone it is essential that children who enter school for the first time be examined in order that any physical defects may be discovered and corrected before the taxpayers' money is spent for their education.

A sick child can not compete in school work with a child who has normal health. Such a child is a burden to the taxpayers, an aggravation to his teachers, a disappointment to his parents and a source of worry to himself. In fairness to all individuals concerned, he should be given the opportunity to have any of his physical defects corrected before he enters school.

The Bureau of Child Hygiene of the California State Department of Public Health is cooperating with the California Congress of Parents and Teachers to provide such physical examinations at no cost for children who are about to enter school for the first time.

HEALTH OFFICERS RECEIVE APPOINTMENTS

Dr. J. D. Dunshee has been appointed city health officer of Pasadena. He succeeds Dr. Wm. F. Wagner, who has been serving, temporarily, since the resignation of Dr. Warren F. Fox, which took effect early in March.

Dr. T. H. Ransom has been appointed city health officer of Burbank to succeed Dr. H. N. Van Meter, who resigned.

EXPERT STUDIES RURAL HEALTH ORGANIZATIONS IN CALIFORNIA

Dr. Charles B. Crittenden, of Nashville, Tennessee, who represents a committee of the American Public Health Association, is making a study of public health administration in rural counties throughout the United States. His activities are carried on in fifty counties scattered throughout the country, in which number four California counties are included. These are San Joaquin, Orange, San Luis Obispo and Ventura counties. Dr. Crittenden's survey does not constitute a critical appraisal, but is in the nature of a study for the benefit of the development of public health administration in rural counties throughout the entire United States.

1928 BRINGS LOW TYPHOID FEVER DEATH RATE

Typhoid fever death rate in California for 1928 is 2.4 per hundred thousand population, the same rate as for 1927. When it is considered that more than 34 people out of every hundred thousand population died of typhoid fever in 1906 the remarkable lowering of the death rate proves the life-saving value in the institution of measures for the prevention of infectious intestinal disease.

A water-borne outbreak of typhoid fever has not occurred in California in five years. Cases of milk-borne typhoid fever continue to occur with more or less regularity and probably will occur until such time as adequate safeguards to public milk supplies are provided. The physical examination of all food handlers would undoubtedly contribute greatly to further reductions in typhoid mortality. Too much credit can not be given to the purveyors of public water supplies for their successful activities in the delivery of pure water to the consuming public. Similar credit is awaiting the purveyors of public milk supplies.

The following table shows the reduction in the typhoid fever death rate in California, 1906–1928:

Year	*Number deaths*	*Rate per 100,000 population*
1906	657	34.9
1907	558	27.9
1908	540	24.4
1909	461	20.0
1910	477	19.9
1911	444	17.7
1912	416	15.9
1913	436	16.0
1914	376	13.3
1915	276	9.4
1916	208	6.8
1917	225	7.1
1918	197	6.0
1919	185	5.5
1920	172	4.9
1921	147	4.1
1922	169	4.6
1923	152	4.0
1924	219	5.6
1925	117	2.9
1926	113	2.7
1927	103	2.4
1928	105	2.4

MORE DEATHS OCCUR IN 1928

There were 66,235 deaths recorded in California last year, against 61,430 deaths registered in 1927. An increased number of deaths from influenza and pneumonia in the latter part of the year, together with normal increases in deaths from tuberculosis, cancer and heart disease, contributed to the greater number of deaths that occurred in 1928. California has a higher general death rate than most states for the reason that its favorable climate attracts large number of individuals who are advanced in years and who migrate to this state to spend the last years of their lives under its moderate climatic conditions.

JAPANESE BIRTH RATE IN CALIFORNIA DECLINING

The numbers of Japanese births in California have declined gradually since 1921. In that year there were 5275 births of Japanese babies within the state and in 1928 there were 2833 such births recorded. The proportion of Japanese births to all other births was greatest in the year 1919, when they constituted 8 per cent of all births that occurred within the state. In 1928 the percentage of Japanese births was but 3.4 per cent of all births that occurred. In 1906, when the state registration of vital statistics began, there were but 134 Japanese births recorded. Less than 1000 such births were recorded annually until 1912, when 1467 certificates for Japanese births were filed with the state. In so far as the actual number of Japanese births is concerned, the total number for 1928 is almost exactly the total number for the year 1914. The percentage to total births, in 1928, however, is about the same as it was in 1912, when the agitation against alien ownership of land in California first began to show itself.

It is difficult to place an exact interpretation upon the lowered Japanese birth rate in California for the reason that there may have occurred, last year, many births of children born to Japanese parents who themselves were born in California. Such births may be classified together with births of children to other native born parents. The checking of Japanese migration to this country is undoubtedly a factor in the production of the lower birth rate and the aging of the Japanese women who were of child-bearing ages ten years ago may constitute another factor in the changed conditions. At all events, it is apparent that the growth of the Japanese population within the state does not constitute the acute problem that it did in 1913, when the alien land law was enacted in this state. The migration of aliens other than Japanese into California presents far greater problems today than does the migration of these Orientals.

MORBIDITY*

Diphtheria.

46 cases of diphtheria have been reported, as follows: Berkeley 1, Oakland 2, Antioch 1, Los Angeles County 4, Alhambra 1, Culver City 1, Glendale 1, Long Beach 1, Los Angeles 7, Monrovia 1, Pasadena 1, Redondo Beach 2, Merced 1, Sacramento County 1, Colton 2, San Bernardino 1, San Francisco 13, Redwood City 1, Santa Clara County 1, Tulare County 1, Ventura 2.

Scarlet Fever.

437 cases of scarlet fever have been reported, as follows: Alameda County 1, Alameda 4, Berkeley 12, Oakland 39, Colusa County 2, Colusa 1, Contra Costa County 7, Pittsburg 2, Fresno County 4, Fresno 6, Selma 1, Bishop 8, Kern County 16, Bakersfield 3, Taft 1, Los Angeles County 18, Compton 2, Culver City 1, Glendale 3, Huntington Park 4, Long Beach 3, Los Angeles 52, Montebello 1, Pasadena 3, San Fernando 3, Lynwood 1, Maywood 1, Bell 2, Ross 1, San Rafael 1, Merced County 5, Merced 1,

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*From reports received on April 29th and 30th for week ending April 27th.

Salinas 1, Orange 1, Garden Grove 1, Colfax 1, Riverside County 5, Riverside 4, Sacramento County 6, Sacramento 15, Hollister 3, Ontario 7, Rialto 1, San Bernardino 1, San Diego County 1, National City 1, San Diego 34, San Francisco 82, San Joaquin County 3, Stockton 23, Santa Clara County 7, Gilroy 4, Los Gatos 1, San Jose 13, Watsonville 3, Rio Vista 7, Healdsburg 1, Petaluma 3, Santa Rosa 1, Tulare County 5, Yuba County 3.

Measles.

88 cases of measles have been reported, as follows: Berkeley 2, Hayward 1, Oakland 3, San Leandro 3, Chico 1, Fresno County 7, Humbodlt County 2, Eureka 1, Lassen County 4, Los Angeles County 2, Glendale 2, Los Angeles 24, Monrovia 2, Pasadena 2, Orange 1, Riverside 1, Sacramento 7, San Diego County 1, San Diego 8, San Francisco 3, Lompoc 3, Santa Barbara 2, San Jose 2, Redding 3, Yolo County 1.

Smallpox.

87 cases of smallpox have been reported, as follows: Berkeley 8, Oakland 2, Butte County 2, Chico 1, Orland 1, Humboldt County 9, Eureka 1, Kings County 2, Long Beach 4, Los Angeles 10, Gustine 1, Salinas 1, Riverside 1, Sacramento 1, Redlands 2, San Diego 2, San Francisco 3, San Joaquin County 1, Stockton 2, Santa Clara County 3, Gilroy 1, San Jose 14, Watsonville 5, Siskiyou County 3, Dunsmuir 3, Tulare County 3, Ventura 1.

Typhoid Fever.

8 cases of typhoid fever have been reported, as follows: Glendale 1, Huntington Park 2, Los Angeles 4, Whittier 1.

Whooping Cough.

313 cases of whooping cough have been reported, as follows: Alameda County 3, Alameda 3, Berkeley 18, Oakland 34, San Leandro 1, Contra Costa County 1, Hercules 6, Pinole 1, Fresno County 1, Bakersfield 5, Hanford 2, Los Angeles County 22, Alhambra 3, Arcadia 3, Compton 3, Glendale 2, Huntington Park 2, Inglewood 1, Long Beach 9, Los Angeles 20, Pasadena 17, Pomona 3, San Gabriel 1, San Marino 5, South Gate 2, Gustine 1, Napa 2, Orange County 8, Brea 1, Santa Ana 1, La Habra 4, Riverside 2, Sacramento 15, San Diego County 4, Chula Vista 6, National City 1, San Diego 3, San Francisco 41, Lodi 4, Stockton 7, Santa Barbara County 1, Santa Barbara 9, Santa Clara County 1, Gilroy 1, Palo Alto 6, San Jose 3, Watsonville 1, Redding 8, Rio Vista 1, Vallejo 1, Santa Rosa 3, Lindsay 6, Sonora 1, Ventura 1, Davis 1, Winters 1.

Meningitis (Epidemic).

19 cases of epidemic meningitis have been reported, as follows: Oakland 1, Los Angeles County 1, Los Angeles 3, Salinas 1, Placentia 1, Riverside 1, Sacramento County 1, Sacramento 1, San Diego 2, San Francisco 4, San Joaquin County 1, Tracy 1, Gilroy 1.

Leprosy.

San Francisco reported one case of leprosy.

Poliomyelitis.

Fresno County reported one case of poliomyelitis.

Encephalitis (Epidemic).

Two cases of epidemic encephalitis have been reported, as follows: Los Angeles County 1, Tuolumne County 1.

NOTE.—Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubation period of the disease. These cases are not chargeable to any one locality.

COMMUNICABLE DISEASE REPORTS

Disease	1929				1928			
	Week ending			Reports for week ending April 27 received by April 30	Week ending			Reports for week ending April 28 received by May 1
	April 6	April 13	April 20		April 7	April 14	April 21	
Actinomycosis	0	0	0	0	0	0	0	1
Chickenpox	498	700	558	539	440	740	634	502
Coccidioidal granuloma	0	1	1	0	0	4	0	0
Diphtheria	37	55	56	46	94	79	99	87
Dysentery (amoebic)	1	0	1	0	1	0	1	4
Dysentery (bacillary)	0	1	7	0	0	0	12	3
Encephalitis (epidemic)	0	1	1	2	1	0	2	0
Erysipelas	28	14	25	27	12	16	14	16
Food poisoning	0	0	1	0	1	1	4	14
German measles	20	45	40	34	334	389	350	374
Glanders	0	0	0	0	0	0	0	0
Gonococcus infection	117	125	89	151	98	87	95	94
Hookworm	0	0	0	0	1	0	0	6
Influenza	74	73	60	48	25	54	38	27
Leprosy	0	1	3	1	0	0	0	2
Malaria	0	0	2	1	1	0	0	0
Measles	53	59	115	88	126	126	154	111
Meningitis (epidemic)	14	37	23	19	3	2	6	5
Mumps	464	582	602	503	277	421	344	358
Ophthalmia neonatorum	1	1	0	1	1	0	0	0
Paratyphoid fever	0	2	0	0	0	0	1	0
Pellagra	3	2	1	2	2	2	0	2
Plague	0	0	0	0	0	0	0	0
Pneumonia (lobar)	84	72	79	65	65	60	43	56
Poliomyelitis	1	0	1	1	4	6	3	6
Rabies (human)	0	0	0	0	0	0	0	0
Rabies (animal)	28	32	9	13	18	20	12	11
Rocky Mt. spotted fever	0	0	0	0	1	0	0	0
Scarlet fever	443	531	485	437	121	122	133	122
Smallpox	65	51	94	87	24	22	25	19
Syphilis	222	152	180	188	150	115	110	147
Tetanus	2	2	2	2	0	2	3	1
Trachoma	6	8	3	4	3	6	3	2
Trichinosis	0	1	0	0	3	0	0	0
Tularemia	0	0	0	0	0	0	0	0
Tuberculosis	290	237	222	159	277	230	170	287
Typhoid fever	5	2	6	8	4	4	4	3
Undulant fever	4	0	1	0	0	0	0	0
Whooping cough	240	325	323	313	191	310	302	379
Totals	2700	3112	2990	2739	2278	2818	2562	2639

Chickenpox, mumps, scarlet fever and whooping cough continue along lines of high prevalence.

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Smallpox maintains the high level that it reached last week.

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Improvement is noted in the reporting of the venereal diseases.

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Epidemic meningitis cases are more widely scattered.

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